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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,031	10/19/2001	James Vincent Crivello	0094046A	6505

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05/14/2003

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EXAMINER

ROBERTSON, JEFFREY

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 05/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,031

Applicant(s)

CRIVELLO, JAMES VINCENT

Examiner

Jeffrey B. Robertson

Art Unit

1712 0

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 28-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I and species (i), claims 1-3, and 5-27 in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 14, the claim sets forth a process for preparing an alkoxysilyl silane or siloxane. However, the claim is confusing because steps c. and d. only appear to refer to situations where an alkoxysilyl siloxane is produced in steps a. and b. This appears to mean that if an alkoxysilyl silane is produced, steps c. and d. do not apply. As a result, with respect to the alkoxysilyl silane, the process appears to be covered in claim 1. In addition, the entire process of claim 14 does not appear to be directed to the production of an alkoxysilyl silane or siloxane, but to the hydrolysis/condensation product thereof. Therefore, the preamble of the claim does not appear to be consistent with the body of the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, and 5-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Crivello (U.S. Patent No. 5,484,950).

For claim 1, in column 3, lines 19-42, Crivello teaches the selective hydrosilylation of a hydrosiloxane that falls within the definition set forth by applicant for the compound of formula I. In column 5, line 45 through column 6, line 20, Scheme A, Crivello teaches a process where the compound of formula I is reacted sequentially with unsaturated compounds to form the final substituted product. For claims 2, 3, and 5-13, in column 7, line 20 through column 8, line 38, Crivello teaches that a vinyl containing epoxy compound, 3-vinyl-7-oxabicyclo[4.1.0] heptane (applicant's compound A), is reacted with 1,1,3,3-tetramethyldisiloxane to form a monohydrosiloxane of formula (II). In column 9, line 50 through column 10, line 37, Crivello teaches that this product is further reacted with vinyltrimethoxysilane (applicant's compound B).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 14, and 17-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crivello (U.S. Patent No. 5,484,950, Crivello I) in view of Crivello et al. (Chem. Mater., 1997, 9, 1554-1561, Crivello II).

For claim 14, in column 3, lines 19-42, Crivello I teaches the selective hydrosilylation of a hydrosiloxane that falls within the definition set forth by applicant for the compound of formula I. In column 5, line 45 through column 6, line 20, Scheme A, Crivello I teaches a process where the compound of formula I is reacted sequentially with unsaturated compounds to form the final substituted product. For claims 17-24, in column 7, line 20 through column 8, line 38, Crivello I teaches that a vinyl containing epoxy compound, 3-vinyl-7-oxabicyclo[4.1.0] heptane (applicant's compound **A**), is reacted with 1,1,3,3-tetramethyldisiloxane to form a monohydrosiloxane of formula (II). In column 9, line 50 through column 10, line 37, Crivello I teaches that this product is further reacted with vinyltrimethoxysilane (applicant's compound **B**). For claims 25 and 26, note that in column 8, Table 1, entries II and XIII, are derived from 1,1,3,3,5,5-hexamethyltrisiloxane and 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, respectively. For claim 27, in column 9, Table 1, in structure XVIII, Crivello I teaches an intermediate derived from methylphenylsilane.

Crivello I fails to teach that the reaction products are reacted with water in the presence of an ion exchange resin, and that the ion exchange resin is separated from the product of that reaction.

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Crivello II, on page 1555, column 1, lines 38-43, teaches that epoxy-functional trimethoxysilanes are reacted in the presence of an ion exchange resin and 0.5-1.5 equivalents of water.

Crivello I and Crivello II are analogous art in that they both teach silicon based compounds containing both epoxy groups and silicon-alkoxy groups. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the products of Crivello I in the condensations of Crivello II. The motivation would have been that Crivello I, in column 1, lines 37-41 and column 2, lines 60-63, sets forth that the compounds produced in the patent are useful for synthesis of oligomers, where the compounds have two different functional groups. The silanes of Crivello II have both epoxy and alkoxy-silicon groups as produced in Crivello I. The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

Allowable Subject Matter

8. Claims 15 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Neither reference cited above teaches or suggests the use of an additional silane of the formula set forth by applicant in the process.

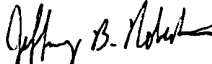
Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Morita (U.S. Patent No. 5,344,905), Morita (U.S. Patent No. 5,358,983), and Meguriya et al. (U.S. Patent No. 6,251,990) are cited for general reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (703) 306-5929. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Jeffrey B. Robertson
Examiner
Art Unit 1712

JBR
May 12, 2003